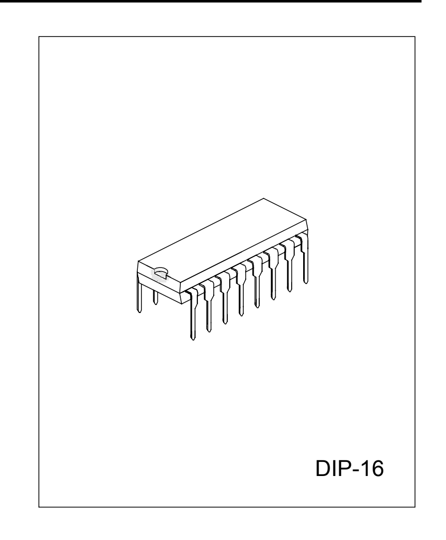
I-CHIP AM/FM RADIO IC

DESCRIPTION

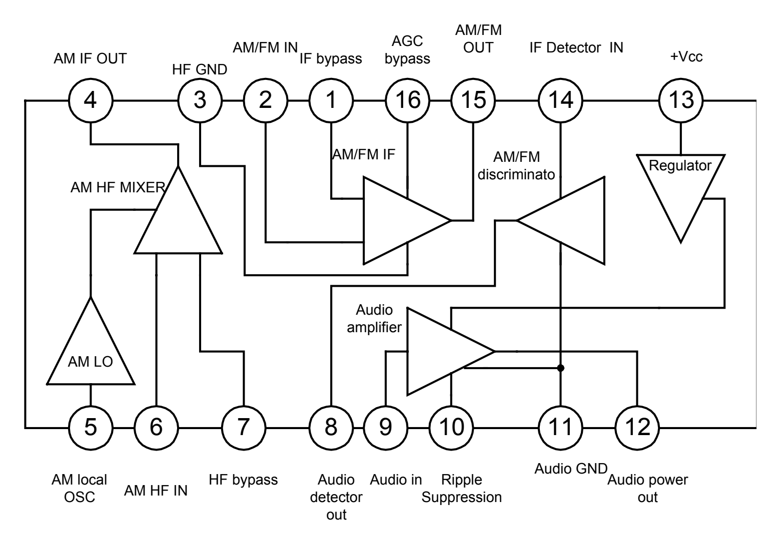
UTC KA22427 is a one-chip AM/FM radio integrated circuit that is suitable for portable radio applications. It includes AM amplifier, local OSC, AM mixer, AM/FM amplifier, AM AGE, FM AGE circuit and also class b Audio Power Amplifier.



FEATURES

*Low external components count.
*Wide operating voltage : 3 - 13 V.
*Internal regulated supply for constant current operation.
*DC selection of AM/FM mode.

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATING(Ta=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
SUPPLY VOLTAGE	VCC	11	V
SUPPLY CURRENT	ICC	44	mA
POWER DISSIPATION	PD	600	mW
THERMAL RESISTANCE	RJ-A	100	°C/W
OPERATING TEMPERATURE	TOPX	-18~65	°C
STORAGE TEMPERATURE	TSTG	-40~125	°C

NOTE:Ta>25°C, DERATE WITH 10mW/°C UNLESS SPECIFIED.

ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Quiescent Circuit Current	ICCQ	SW1→FM,VCC=3V	7	12	17	mA
		SW1→FM,VCC=9V	10	17	23	
Pin 16 Terminal Voltage	V16(FM)	SW1→FM,ICC=42mA	2.0	2.4	3.1	V
Limiting Voltage	VIN(lim)	SW1→FM,VCC=5.5V,-3dB V16=2.4V,VR=Min.		57		dBμV
Internal Regulated Voltage	VCC	SW1→AM,ICC=42mA	12.5	13.2	14.0	V
Pin 16 Voltage	V16(AM)	SW1→AM,VCC=9V	1.4		1.9	V
Signal to Noise Ratio	VO	SW1→AM,VCC=12V,VIN=37dB SW2→45Ω,V16=1.4V	1.5	3.0		V
Maximum Sensitivity	S/N	SW1→AM,VCC=5.5V, SW2→8Ω,VIN=37.5dB	15	20		dB
Power Output	POUT	SW2→8Ω,VCC=5.5V,f=1KHZ VR=Min. THD=10%	0.28			W
Total Harmonic Distortion	THD	SW2→45Ω,ICC=42mA,f=1KHZ VR=Min. VOUT=2V		0.5	4.0	%
Voltage Gain	GV	SW2→8Ω,VCC=5.5V,f=1KHZ VR=Min.		40		dB

INPUT - OUTPUT IMPEDANCE(Ta=25°C,VCC=6V)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Pin 2 Input (AM)	Rip2(AM)	f=465KHZ		200		KΩ
Impedance (AM)	Cip2(AM)	f=465KHZ		3		pF
Pin 2 Input (FM)	Rip2(FM)	f=10.7MHZ		30		KΩ
Impedance（FM）	Cip2(FM)	f=10.7MHZ		3.5		pF
Pin 4 Output	Rop4	f=465KHZ		300		KΩ
Impedance	Cop4	f=465KHZ		6		pF
Pin 6 Input	Rip6	f=1MHZ		50		KΩ
Impedance	Cip6	f=1MHZ		5		pF
Pin 14 Input (AM)	Rip14(AM)	f=465KHZ		300		KΩ
Impedance（AM）	Cip14(AM)	f=465KHZ		3.5		pF
Pin14 Input (FM)	Rip14(FM)	f=10.7MHZ		300		KΩ
Impedance（FM）	Cip14(FM)	f=10.7MHZ		4		pF
Pin15 Output (AM)	Rop15(AM)	f=465KHZ		300		KΩ
Impedance（AM）	Cop15(AM)	f=465KHZ		5.5		pF
Pin15 Output (FM)	Rop15(FM)	f=10.7MHZ		300		KΩ
Impedance（FM）	Cop15(FM)	f=10.7MHZ		6		pF

TEST CIRCUIT

